

REMARKS

Claims 17-24, 29, 31, 33, 34, and 36-38 are pending in the application upon entry of the amendments. Independent claims 17, 21, and 33 have been amended for consistency and to better describe certain aspects of the invention. Moreover, claim 17 incorporates features on subject matter set forth in previous dependent claim 30. Claim 21 incorporates features on subject matter set forth in previous dependent claims 25 and 32. Claim 33 incorporates features on subject matter set forth in previous dependent claims 35 and 39. Claims 25, 30, 32, 35, and 39 have been canceled without prejudice. Favorable reconsideration in light of the amendments and the remarks that follow is respectfully requested.

The Obviousness Rejection

Claims 17-25 and 29-39 stand rejected under 35 U.S.C §103(a) over Romanenko et al (WO 01/087798) and equivalent Romanenko et al (EP 1205241). Independent claim 17 requires a method of purifying a crude carboxylic aromatic acid that involves an extruded carbonaceous material having pore sets of defined sizes and a specific metal catalyst. The Examiner contends that the term "about" places the pores sizes as taught by Romanenko within the claimed matter. Independent claim 17 is currently amended to alleviate possible confusion arising over the meaning of the term "about". Claim 17 currently reads "pores having a pore diameter between 40 Å and 100 Å" and "pores having a pore diameter between 5,000 Å and 20,000 Å". Moreover, the subject invention is distinct from the Examiner's cited document as it embodies two defined sets of pore. This distinction is conceded by the Examiner in the Final Office Action dated April 17, 2008. Since the present application claims two defined sets of pores that are clearly distinguishable, by number and size, from the teachings of Romanenko; it is respectfully requested that the rejection of claim 17 be withdrawn.

Independent claim 21 requires that at minimum about 40% of total Hg porosity occurs in pores having a diameter of 200 Å or larger, or at minimum about 34% of total Hg porosity occurs in pores having a diameter of 5,000 Å and

larger in the extruded activated carbonaceous material. The Examiner asserts a unsupported conclusory statement that "in pores having a diameter of about 5,000 Å....the percent of the total Hg porosity in the granulation process of making porous carbon material is well understood by those with skill in the art to be a result effective variable, especially when attempting to control the selectivity of the catalytic process." (page 6, ¶ 2). There is no reasonable basis for this assertion for at least two reasons.

Romanenko teaches the use of several commonly available granulated carbonaceous materials (page 4, lines 15-18) that possess characteristics amenable for producing a mono- or bimetallic catalytic composition, by combining such carbonaceous material and a metal or combination of metals, for the purpose of purifying terephthalic acid. In contrast, the present claims embody a structurally distinct extruded activated carbonaceous catalyst support that has **defined pore structures** (page 3, lines 24-26) NOT taught or suggested by Romanenko. This feature significantly improves the functionality and longevity of a catalytic composite in a substantially improved method for purifying crude polycarboxylic aromatic acid composition. It minimizes mechanical attrition while retaining corrosion resistance in an improved method of purifying a crude polycarboxylic aromatic acid composition. The extruded carbon catalysts of the present invention have a longer life compared to conventional granular carbon catalysts. That is, they have a lower deactivation rate and greater activity than conventional granular carbon catalysts. (page 6, lines 1-30). Further, the featured structural distinctions provide for a more efficient method of purifying an aromatic acid by decreasing mass transfer resistance, lowering risk of carbon contamination from breakage, and by requiring lower catalytic input while increasing the degree of purity of terephthalic acid product (page 2, lines 16-26).

The second problem with the Examiner's assertion is that the Hg porosity that occurs in pores having a diameter of 5000 Å is NOT well understood by those with skill in the art to be a result effective variable when attempting to control the selectivity of the catalytic process. Rather, Romanenko suggests that

the selectivity of the purification process is dependent upon the combination and quantity of metal catalysts employed with a particular carbon material (see Tables 2-6). A person having ordinary skill in the art would NOT consider the percent Hg porosity in carbon materials having pores of about 5000 Å to control the selectivity of a catalytic process because Romanenko fails to teach or suggest a carbon material that contains defined ranges of pores sized, and respective Hg porosities. Among the carbon materials disclosed by Romanenko, none have a pore size outside of the range from 40 Å to 400 Å. Having at least a second set of defined pore structures between about 5,000 Å and 20,000 Å is a unique and necessary feature of the present invention. **The claimed mesoporosity reduces problems that arise from using pore sizes outside of the claimed ranges;** the claimed pore sizes affect possible mal-distribution of liquid or gas flows in a catalytic reactor bed and eliminate the requirement of locating all active catalytic metals at the exterior surfaces of the carbonaceous supports (page 2, lines 4-15). The claimed pore sizes do NOT affect selectivity of the process. Hence, the rejection of independent claim 21 should be withdrawn.

Similarly, independent claim 33 relates to the percent Hg porosity in defined pores. As concluded over claim 21, the claimed pore sizes do NOT affect selectivity of the process. Hence, the rejection of independent claim 33 should also be withdrawn. Therefore, in light of the aforementioned remarks it is respectfully requested that the obviousness rejections be withdrawn.

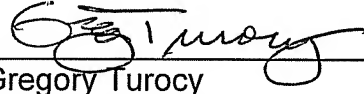
Petition for Extension of Time

A request for a one month extension of time is hereby made. Payment is being made through the EFS electronic filing system.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063.

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution; the Examiner is invited to contact applicant's undersigned representative at the telephone number listed below.

Respectfully submitted,
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